

Substitute for form 1449/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use as many sheets as necessary)				Application Number	09/821,182
				Filing Date	March 29, 2001
				First Named Inventor	Daniel R. Shepard
				Art Unit	2824
				Examiner Name	A. Q. Tran
Sheet	1	of	8	Attorney Docket Number	NUP-001RE

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A1*	US-2,709,042	05-24-1955		
	A2*	US-3,091,754	05-28-1963		
	A3*	US-3,245,051	04-05-1966	J. Robb	
	A4*	US-3,373,406	03-01-1968	Cannon et al.	
	A5*	US-3,626,389	12-07-1971	Waaben	
	A6*	US-3,721,964	03-20-1973	Barrett et al.	
	A7*	US-3,838,405	09-24-1974	Arnett et al.	
	A8*	US-3,942,071	03-02-1976	Krebs et al.	
	A9*	US-4,010,453	03-01-1977	Lewis	
	A10*	US-4,090,190	05-16-1978	Rostkovsky et al.	
	A11*	US-4,240,151	12-16-1980	Kawagoe et al.	
	A12*	US-4,308,595	12-29-1981	Houghton	
	A13*	US-4,312,046	01-19-1982	Taylor	
	A14*	US-4,322,822	03-30-1982	McPherson	
	A15*	US-4,342,102	07-27-1982	Puar	
	A16*	US-4,385,368	05-24-1983	Principi et al.	
	A17*	US-4,394,752	07-19-1983	Boudon et al.	
	A18*	US-4,404,480	09-13-1983	Ransom et al.	
	A19*	US-4,442,507	04-10-1984	Roesner	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)	MM-DD-YYYY			
	B1	DE-10111454-A1	09-26-2002	Infineon Technologies Ag		✓

Examiner Signature	Date Considered
--------------------	-----------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. \* CITE NO.: Those application(s) which are marked with a single asterisk (\*) next to the Cite No. are not supplied (under 37 CFR 1.98(a)(2)(ii)) because that application was filed after June 30, 2003 or is available in the IFW. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kind Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449/PTO		<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use as many sheets as necessary)		Application Number	09/821,182
		Filing Date	March 29, 2001
		First Named Inventor	Daniel R. Shepard
		Art Unit	2824
		Examiner Name	A. Q. Tran
Sheet	2	of	8
		Attorney Docket Number	NUP-001RE

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A20*	US-4,479,200	10-23-1984	Sato et al.	
	A21*	US-4,525,921	07-02-1985	Carson et al.	
	A22*	US-4,534,008	08-06-1985	Fuchs et al.	
	A23*	US-4,554,640	11-19-1985	Wong et al.	
	A24*	US-4,561,070	12-24-1985	Armstrong	
	A25*	US-4,646,128	02-24-1987	Carson et al.	
	A26*	US-4,646,266	02-24-1987	Ovshinsky et al.	
	A27*	US-4,710,900	12-01-1987	Higuchi	
	A28*	US-4,721,885	01-26-1988	Brodie	
	A29*	US-4,757,475	07-12-1988	Awaya et al.	
	A30*	US-4,772,886	09-20-1988	Hasegawa et al.	
	A31*	US-4,782,340	11-01-1988	Czubatyj et al.	
	A32*	US-4,800,529	01-24-1989	Ueno et al.	
	A33*	US-4,845,679	07-04-1989	Vu	
	A34*	US-4,884,238	11-28-1989	Lee et al.	
	A35*	US-5,051,865	09-24-1991	Kato et al.	
	A36*	US-5,163,328	11-17-1992	Holland et al.	
	A37*	US-5,203,731	04-20-1993	Zimmerman	
	A38*	US-5,296,716	03-22-1994	Ovshinsky et al.	

FOREIGN PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document Country Code <sup>2</sup> -Number-Kind Code <sup>3</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

Examiner Signature	Date Considered
--------------------	-----------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. \* CITE NO.: Those application(s) which are marked with an asterisk (\*) next to the Cite No. are not supplied (under 37 CFR 1.98(a)(2)(ii)) because that application was filed after June 30, 2003 or is available in the IFW. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 801.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO				<b>Complete if Known</b> Application Number 09/821,182 Filing Date March 29, 2001 First Named Inventor Daniel R. Shepard Art Unit 2824 Examiner Name A. Q. Tran Attorney Docket Number NUP-001RE	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>					
Sheet	3	of	8		

## U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.†	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code * (if known)			
	A39*	US-5,357,471	10-18-1994	Alapat	
	A40*	US-5,397,957	03-14-1995	Zimmerman	
	A41*	US-5,432,729	07-11-1995	Carson et al.	
	A42*	US-5,441,907	08-15-1995	Sung et al.	
	A43*	US-5,463,269	10-31-1995	Zimmerman	
	A44*	US-5,463,583	10-31-1995	Takashina	
	A45*	US-5,569,973	10-29-1996	Zimmerman	
	A46*	US-5,576,986	11-19-1996	Matsuzaki et al.	
	A47*	US-5,640,343	06-17-1997	Gallagher et al.	
	A48*	US-5,668,032	09-16-1997	Holmberg et al.	
	A49*	US-5,675,531	10-07-1997	McClelland et al.	
	A50*	US-5,719,589	02-17-1998	Norman et al.	
	A51*	US-5,835,396	11-10-1998	Zhang	
	A52*	US-5,837,564	11-17-1998	Sandhu et al.	
	A53*	US-5,840,608	11-24-1998	Chang	
	A54*	US-6,055,180	04-25-2000	Gudesen et al.	
	A55*	US-6,075,723	06-13-2000	Naiki et al.	
	A56*	US-6,117,720	09-12-2000	Harshfield	
	A57*	US-6,163,475	12-19-2000	Proebsting	

## FOREIGN PATENT DOCUMENTS

[illegible]

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. \* CITE NO.: Those application(s) which are marked with an single asterisk (\*) next to the Cite No. are not supplied (under 37 CFR 1.98(a)(2)(iii)) because that patent was filed after June 30, 2003 or is available in the IFW. \* Applicants unique citation designation number (optional). See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 801.4. \* Error Office that issued the application. \* Priority: Indicate the year of the application, the kind of the parent application, the kind of the parent application, and the kind of the parent application. \* Precede the serial number of the patent document. \* Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. \* Applicant to place a check mark here if English language Translation is attached.

Substitute for form 1449/PTO		<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use as many sheets as necessary)		Application Number	09/821,182
		Filing Date	March 29, 2001
		First Named Inventor	Daniel R. Shepard
		Art Unit	2824
		Examiner Name	A. Q. Tran
Sheet	4	of	8
		Attorney Docket Number	NUP-001RE

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number/Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A58*	US-6,185,122	02-06-2001	Johnson et al.	
	A59*	US-6,198,682	03-06-2001	Proebsting	
	A60*	US-6,236,587	05-22-2001	Gudsen et al.	
	A61*	US-6,259,132	07-10-2001	Pio	
	A62*	US-6,351,023	02-26-2002	Gates et al.	
	A63*	US-6,459,095	10-01-2002	Heath et al.	
	A64*	US-6,462,998	10-08-2002	Proebsting	
	A65*	US-6,559,468	05-06-2003	Kuekes et al.	
	A66*	US-6,586,327-A1	07-01-2003	Shepard	
	A67*	US-6,587,394	07-01-2003	Hogan	
	A68*	US-6,598,164	07-22-2003	Shepard	
	A69*	US-6,613,650	09-02-2003	Holmberg	
	A70*	US-6,721,223	04-13-2004	Matsumoto et al.	
	A71*	US-6,744,681	06-01-2004	Hogan	
	A72*	US-6,839,260	01-04-2005	Ishii	
	A73*	US-7,054,219	05-30-2006	Petti et al.	
	A74*	US-7,088,613	08-08-2006	Lue et al.	
	A75*	US-7,149,934-A1	12-12-2006	Shepard	
	A76*	US-7,183,206-A1	02-27-2007	Shepard	

FOREIGN PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document Country Code <sup>2</sup> -Number/Kind Code <sup>3</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

Examiner Signature	Date Considered
--------------------	-----------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. \* CITE NO.: Those application(s) which are marked with an asterisk (\*) next to the Cite No. are not supplied (under 37 CFR 1.98(a)(2)(ii)) because that application was filed after June 30, 2003 or is available in the IFW. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 801.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449/PTO		<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use as many sheets as necessary)		Application Number	09/821,182
		Filing Date	March 29, 2001
		First Named Inventor	Daniel R. Shepard
		Art Unit	2824
		Examiner Name	A. Q. Tran
		Attorney Docket Number	NUP-001RE
Sheet	5	of	8

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A77*	US-7,190,602	03-13-2007	Johnson et al.	
	A78*	US-7,330,369	02-12-2008	Tran	
	A79*	US-7,376,008	05-20-2008	Shepard	
	A80*	US-7,408,798	08-05-2008	Bernstein et al.	
	A81*	US-7,460,384	12-02-2008	Shepard	
	A82*	US-7,471,547	12-30-2008	Schloesser	
	A83*	US-7,548,453	06-16-2009	Nestler	
	A84*	US-7,548,454	06-16-2009	Nestler	
	A85*	US-7,554,873	06-30-2009	Lee et al.	
	A86*	US-7,593,246	09-22-2009	Shepard	
	A87*	US-7,593,256	09-22-2009	Nestler	
	A88*	US-20030026120-A1	02-06-2003	Scheuerlein	
	A89*	US-20030028699	02-06-2003	Holtzman et al.	
	A90*	US-20040145938	07-29-2004	Tihanyi	
	A91*	US-20040160805-A1	08-19-2004	Rinerson et al.	
	A92*	US-20050067675	03-31-2005	Shepard	
	A93*	US-20050127350	06-16-2005	Furkay et al.	
	A94*	US-20060072427	04-06-2006	Kanda et al.	
	A95*	US-20070028150	02-01-2007	Shepard	

FOREIGN PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document Country Code <sup>2</sup> -Number-Kind Code <sup>3</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear

Examiner Signature	Date Considered
--------------------	-----------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. \* CITE NO.: Those application(s) which are marked with an asterisk (\*) next to the Cite No. are not supplied (under 37 CFR 1.98(a)(2)(ii)) because that application was filed after June 30, 2003 or is available in the IFW. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 801.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.



Substitute for form 1449/PTO  <div style="text-align: center;"><b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b></div> <div style="text-align: center;"><i>(Use as many sheets as necessary)</i></div>		<div style="text-align: center;"><b>Complete if Known</b></div> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Application Number</td> <td>09/821,182</td> </tr> <tr> <td>Filing Date</td> <td>March 29, 2001</td> </tr> <tr> <td>First Named Inventor</td> <td>Daniel R. Shepard</td> </tr> <tr> <td>Art Unit</td> <td>2824</td> </tr> <tr> <td>Examiner Name</td> <td>A. Q. Tran</td> </tr> <tr> <td>Attorney Docket Number</td> <td>NUP-001RE</td> </tr> </table>		Application Number	09/821,182	Filing Date	March 29, 2001	First Named Inventor	Daniel R. Shepard	Art Unit	2824	Examiner Name	A. Q. Tran	Attorney Docket Number	NUP-001RE
Application Number	09/821,182														
Filing Date	March 29, 2001														
First Named Inventor	Daniel R. Shepard														
Art Unit	2824														
Examiner Name	A. Q. Tran														
Attorney Docket Number	NUP-001RE														
Sheet	7	of	8												

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	C1	Berger, "Models for Contacts to Planar Devices," Solid-State Electronics, vol. 15 (1972), pp. 145-158.	
	C2	Crawford et al., "An Improved Tunnel Diode Memory System," IBM Journal (July 1963), pp. 199-206.	
	C3	De Graaf et al., "A Novel High-Density Low-Cost Diode Programmable Read only Memory," IEEE IEDM, session 7.6.1 (1996), pp. 189-192.	
	C4	Hodges et al., "Analysis and Design of Digital Integrated Circuits," McGraw-Hill Book Company, pp. 27-32. )	
	C5	Hurst, "A Survey of Published Information on Universal Logic Arrays," Microelectronics and Reliability, vol. 16 (1977), pp. 663-674.	
	C6	International Search Report and Written Opinion in International Patent Application No. PCT/US2007/007792, mailed October 30, 2007.	
	C7	International Search Report and Written Opinion in International Patent Application No. PCT/US07/011020, mailed July 18, 2008 (16 pages).	
	C8	International Search Report and Written Opinion in International Patent Application No. PCT/US2008/075986, mailed January 22, 2009 (13 pages).	
	C9	International Search Report and Written Opinion in International Patent Application No. PCT/US2008/082503, mailed February 25, 2009 (13 pages).	
	C10	McConnell et al., "Diode-Transistor Logic," Digital Electronics, Chapter 5, West Virginia Univ. (2002), pp. 1-14.	

Examiner Signature	Date Considered
--------------------	-----------------

<sup>1</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>2</sup>Applicant's unique citation designation number (optional). <sup>3</sup>Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449/PTO  <div style="text-align: center;"><b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b></div> <div style="text-align: center;"><i>(Use as many sheets as necessary)</i></div>		<div style="text-align: center;"><b>Complete if Known</b></div> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Application Number</td> <td>09/821,182</td> </tr> <tr> <td>Filing Date</td> <td>March 29, 2001</td> </tr> <tr> <td>First Named Inventor</td> <td>Daniel R. Shepard</td> </tr> <tr> <td>Art Unit</td> <td>2824</td> </tr> <tr> <td>Examiner Name</td> <td>A. Q. Tran</td> </tr> <tr> <td>Attorney Docket Number</td> <td>NUP-001RE</td> </tr> </table>		Application Number	09/821,182	Filing Date	March 29, 2001	First Named Inventor	Daniel R. Shepard	Art Unit	2824	Examiner Name	A. Q. Tran	Attorney Docket Number	NUP-001RE
Application Number	09/821,182														
Filing Date	March 29, 2001														
First Named Inventor	Daniel R. Shepard														
Art Unit	2824														
Examiner Name	A. Q. Tran														
Attorney Docket Number	NUP-001RE														
Sheet	8	of	8												

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	C11	Near et al., "Read-only Memory Adds to Calculator's Repertoire," Electronics (February 3, 1969), pp. 70-77.	
	C12	Partial International Search Report in International Patent Application No. PCT/US07/011020, mailed April 14, 2008, 6 pages.	
	C13	"Summary Page: National Radio Institute 832," Old-Computers.com, <a href="http://old-computers.com/museum/computer.asp?c=884&amp;st=1">http://old-computers.com/museum/computer.asp?c=884&amp;st=1</a> , (April 4, 2007) 2 pages.	
	C14	Wang et al., "High-Current-Density Thin-Film Silicone Diodes Grown at Low Temperature," Applied Phys. Lett., vol. 85(11), pp. 2122-2124 (Sept. 13, 2004).	
	C15	Wang et al., "Low Temperature Thin-Film Silicon Diodes for Consumer Electronics," Mater. Res. Soc. Symp. Proc., vol. 862 (2005), pp. A15.5.1-A15.5.6.	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

<sup>1</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>2</sup>Applicant's unique citation designation number (optional). <sup>3</sup>Applicant is to place a check mark here if English language Translation is attached.